



UNITED STATES PATENT AND TRADEMARK OFFICE

W.C.

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/817,330	03/26/2001	Phillip C. Celaya	ONS00149	8912

7590 02/28/2003

Robert D. Atkins
ON Semiconductor
Patent Administration Dept - MD A230
P.O. Box 62890
Phoenix, AZ 85082-2890

EXAMINER

PHAN, THIEM D

ART UNIT

PAPER NUMBER

3729

DATE MAILED: 02/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/817,330

Applicant(s)

CELAYA ET AL.

Examiner

Tim Phan

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 December 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 17-37 is/are pending in the application.
- 4a) Of the above claim(s) 17 and 18 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 19-37 is/are rejected.
- 7) ☒ Claim(s) 19-31 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 3/26/01 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicants' election with traverse of Group II and Species B (claims 19-37) in Paper No. 7 has been duly noted. The Office established a prima facie case of the Restriction provided in Paper No. 6. That is the inventions of Group II, Species A and B have a separate classification. Applicants urge that this Application imposes no serious burden for the Office. Applicants offer no evidence for this point nor can they. In addition to the Office's proper and correct finding that there was and is a proper Restriction, the Office has concluded and therefore finds that this Application is burdensome for the Office. Alternatively since the Restriction has been held to be proper, whether there is a burden on the Office is irrelevant.

Moreover the method of using a product by applying a signal is patently different from a method of making a product by projecting a conductive lead through plating (MPEP §806.04(f)). The inventions of Groups II, Species A and B each have a separate status in the art and clearly have a separate field of search.

2. In accordance with MPEP § 803, the Office has properly held that the inventions of Groups II, Species A and B are each independent or distinct. The Restriction in Paper No. 6 is proper and is therefore made **FINAL**.

Art Unit: 3729

3. Claims 1-18 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Group or Species, there being no allowable generic or linking claim.

Applicant is required to cancel claims 1-18 or take other appropriate action.

Title

4. The following title is suggested: Method of making integrated circuit package.

Claims Objection

5. Claims 19-31 are objected to because of the following informalities: "first surface" in claim 19 should be "second surface" and "second surface" in claim 20 should be "first surface".

Appropriate correction is required.

Drawings

6. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

8. Claims 19-37 are rejected under 35 U.S.C. 102(a) as being anticipated by Kim (US 6,162,664).

As applied to claims 19 and 32, Kim discloses a method of making a semiconductor chip package comprising the step of

- providing a substrate for mounting a semiconductor die (Cf. fig. 8, elements 2 and 1)
- plating a conductive material (Cf. fig. 5, element 40; column 4, lines 14-18) to project the lead outwardly from the substrate (Cf. fig. 8, element 2; column 1, line 20).

As applied to claim 20, Kim discloses the mounting of semiconductor die (Cf. fig. 8, element 1) on the substrate.

As applied to claims 21-24, Kim discloses the forming of a signal path on the substrate where the wire bond is attached (Cf. fig. 8, element 12) and a signal path feeding (Cf. fig. 8, element 11) through the substrate, and the disposing of conductive material (Cf. fig. 5, elements 40 & 60) to extend the signal path at other end pad of the substrate.

As applied to claims 25-27, 29-31 and 33-35, Kim discloses the process of photoetching and plating the conductive layer to a certain thickness higher than 50 micrometers (Cf. fig. 5, elements 40 & 60; column 4, lines 14-19; column 4, lines 18 & 24) at the exit of the feedthrough signal path, in an outward direction in order to maintain space between the package chip substrate and motherboard.

As applied to claim 28, Kim discloses the wire bonding (Cf. fig. 8, element 12) signal-connecting the semiconductor to the first or outside lead (Cf. fig. 8, element 40).

As applied to claims 36 and 37, Kim discloses a method of making a semiconductor chip package comprising the step of

- mounting a semiconductor die on a substrate (Cf. fig. 8, elements 1 and 2)
- disposing a conductive signal path from the die and feeding through the substrate (Cf. fig. 8, elements 12 & 11),
- disposing the conductive material on the exit of the feed-through signal path to form the outwardly projecting lead (Cf. fig. 8, element 40) by plating (Cf. column 4, lines 14-19).

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 3729

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tim Phan whose telephone number is 703-605-0707. The examiner can normally be reached on M - F, 9AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 703-308-1789. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

TP

Tim Phan
Examiner
Art Unit 3729

tp
February 21, 2003

CJA
CARL J. ARBES, P. d.
PRIMARY EXAMINER